

GEA MANURE DECANTER FOR MANURE SEPARATION.

With the highest separation efficiency of
Nitrogen (N) und Phosphate (P_2O_5).








BEST SEPARATION OF NUTRIENTS N AND P₂O₅






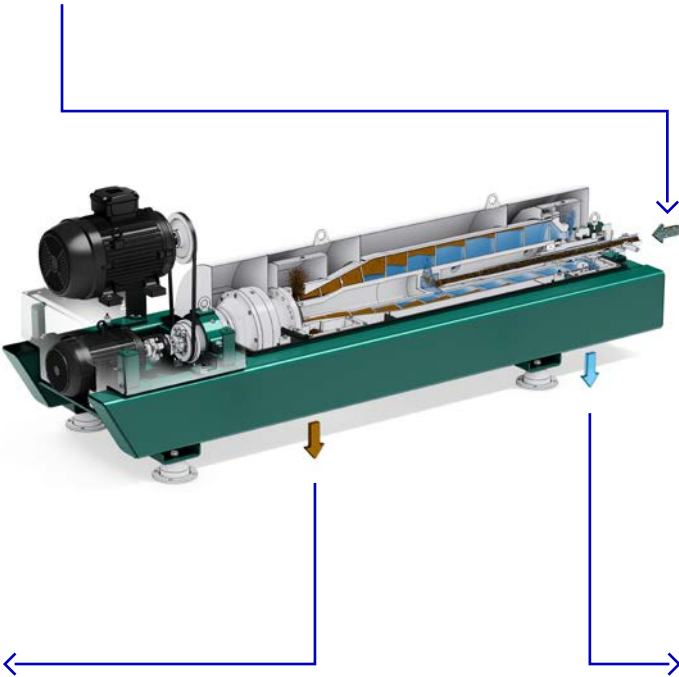
Liquid manure obtained from animal husbandry is a valuable fertilizer in modern agriculture. It must, however, be properly integrated into the natural nutrient cycle. GEA manure Decanter turn manure into a recyclable resource to generate energy and reusable material – with the best possible yields. The aim is to process the liquid manure, to treat the associated nutrient surpluses and to take specific advantage of the resultant products.

Maximizing nutrient efficiency.
GEA manure Decaners transform
manure into a valuable resource.



Solid fraction			
			
Dry solids (DS)	> 27 %	> 30 %	> 30 %
Organic solids (OS)	> 23.5 % 25 %	> 23.9 % 35 %	> 23.8 % 40 %
Nitrogen (N)	7.9 kg/t 60 %	14.5 kg/t 75 %	9.6 kg/t 70 %
Phosphate (P ₂ O ₅)	13.6 kg/t 5 %	18.2 kg/t 15 %	6.1 kg/t 25 %
Potassium (K ₂ O)	1.6 kg/t	6.2 kg/t	8.4 kg/t

Decanter feed			
			
Raw manure			
Dry solids (%)	4 - 7	6 - 10	7 - 10
Organic solids (%)	3.5 - 5.5	5.0 - 7.0	5.5 - 8.0
Nitrogen (kg / t)	4.2	7.2	4.4
Phosphate (kg / t)	3.0	4.2	1.6
Potassium (kg / t)	4.3	7.2	6.2






	solid liquid	
Dry solids (DS)	<div></div>	<div></div>
Organic solids (OS)	<div></div>	<div></div>
Nitrogen (N)	<div></div>	<div></div>
Phosphate (P ₂ O ₅)	<div></div>	<div></div>
Potassium (K ₂ O)	<div></div>	<div></div>

Properties raw manure

- Difference in animal species, food, maturity, etc.
- Nitrogen binds partly to solid (N_{org}) and is partially soluble (N_{min})
- P₂O₅ binds mostly to solids
- K₂O is completely soluble
- Decanter removes particles down to microns
- Major reduction of Chemical Oxygen Demand (COD) level in liquid fraction (> 50 – 90 %)



Liquid fraction			
			
Dry solids (DS)	> 2.5 %	> 2.5 %	> 3.5 %
Organic solids (OS)	> 1.6 % 75 %	> 2.3 % 65 %	> 2.2 % 60 %
Nitrogen (N)	3.6 kg/t 40 %	5.7 kg/t 25 %	3.2 kg/t 30 %
Phosphate (P ₂ O ₅)	1.4 kg/t 95 %	1.3 kg/t 85 %	0.6 kg/t 75 %
Potassium (K ₂ O)	4.7 kg/t	7.4 kg/t	5.7 kg/t

YOUR BENEFITS

- Highest separation efficiency of Nitrogen (40 %) and P_2O_5 (70 %) by the use of g-forces
- No need for chemicals
- No filtration system, therefore no blockages
- Very compact design ($4 \text{ m}^3/\text{m}^2$)
- Easy installation and operation
- PLC controlled and therefore a completely independent operating system
- Automatic adaptation of fluctuating feed streams
- Ability to build on mobile unit, complete with pumps and other equipment
- Global service organization, 24 /7 availability



Mobile decanter systems can be seamlessly integrated into ongoing operations and provide rapid assistance in slurry treatment. They separate and dewater solids, preparing them for further processing into fertilizer.

GEA Westfalia Separator Group GmbH

Werner-Habig-Straße 1
59302 Oelde, Germany

Phone +49 2522 77-0
gea.com/contact